

I CLAIM:

- [c1] 1. A broadband wireless network implementation process, comprising:
- developing a profile of high bandwidth users in a market area based on available marketing information from said market area;
  - checking said profile for accuracy;
  - revising said profile until a desired accuracy level is obtained;
  - obtaining addresses for all buildings in said market area;
  - cross-referencing said addresses with a high resolution orthophotographic database to identify precise building locations;
  - overlaying a layer of existing and planned competitive broadband services for said market area in a geographic information system (GIS); and
  - identifying target areas for broadband wireless services (WBS).
- [c2] 2. The broadband wireless network implementation process of claim 1, further comprising calculating optimal tower placement for providing WBS to said target area.
- [c3] 3. The broadband wireless network implementation process of claim 2, further comprising:
- calculating a cost of said optimal tower placement for providing WBS to said target area;
  - counting predicted customers within said target area; and
  - calculating an average price for service.
- [c4] 4. The broadband wireless network implementation process of claim 3, wherein said developing a profile of high bandwidth users in a market area further comprises analyzing business and bandwidth usage databases to identify criteria

of high bandwidth users.

- [c5] 5. The broadband wireless network implementation process of claim 3, wherein said checking said profile for accuracy further comprises surveying businesses matching said profile in said market area for interest in broadband services.
- [c6] 6. The broadband wireless network implementation process of claim 3, wherein said desired accuracy level is greater than or equal to 85%.
- [c7] 7. The broadband wireless network implementation process of claim 3, wherein a real estate database is used for said obtaining of addresses for all buildings in said market area.
- [c8] 8. The broadband wireless network implementation process of claim 7, wherein said real estate database further includes longitude and latitude for all buildings in said market area that is corrected with said high-resolution orthophotographic database.
- [c9] 9. The broadband wireless network implementation process of claim 3, further comprising determining height and shape of buildings and line-of-sight obstructions in said market area using canopy digital elevation model (DEM) data.
- [c10] 10. The broadband wireless network implementation process of claim 3, further comprising identifying potential hub buildings in said market area.
- [c11] 11. The broadband wireless network implementation process of claim 3, wherein said information on existing and planned competitive broadband services for said market area includes wireless service competition, broadband landline competition, and ISP service.
- [c12] 12. The broadband wireless network implementation process of claim 11, wherein information on existing and planned wireless service competition is obtained from real estate investment trust (REIT) agreements, monitoring public

records, Federal Communications Commission (FCC) filings, radio Frequency (RF) emission databases, and site surveys.

[c13] 13. The broadband wireless network implementation process of claim 11, wherein information on existing and planned broadband landline service competition is obtained by locating central offices of digital subscriber line (DSL) providers to determine coverage area, determining coverage regions of cable providers, and determining on-net fiber optic probability of all buildings in the market area based on NPA/NXXs serviced by competitive local exchange carriers (CLECs) or a number of individual switch codes for incumbent local exchange carriers (ILECs).

[c14] 14. A method of planning and designing a broadband wireless network, comprising:

analyzing a business bandwidth usage database for usage trends or patterns by standard industry code (SIC) to identify target SICs;

searching a business record database for target businesses in a market area based on having said target SICs and importing a business name, address, 4-digit SIC, branch/headquarter description, and number of employee field for each of said target businesses into a geographic information system (GIS);

standardizing each said address field by parsing it into street address, suite/apartment number, city, state, and zip code fields and adding a longitude and latitude field;

identifying a building for each business based on said street address field;

correcting said longitude and latitude fields in said GIS using orthophotographic images and raster image parcel maps of said market area; and

quantify bandwidth and number of target businesses per building to determine target areas based on a concentration of target businesses.

- [c15] 15. The method of planning and designing a broadband wireless network of claim 14, wherein headquarter businesses are treated and targeted differently than branch businesses of the same SIC.